

#### REMARKS

Claims 16-29 are pending and have been rejected under 35 U.S.C. §112. Claims 16-19, 21-25 and 28-29 have been rejected under 35 U.S.C. §102 and Claims 20, 26 and 27 have been rejected under 35 U.S.C. §103. Claims 16 and 25 are amended herein. Claims 16-29 remain for consideration. No new matter has been added.

As mentioned above, amendments are proposed to Claims 16 and 25. Support for amended Claims 16 and 25 is found in the original disclosure, for example in the Substitute Specification at least at page 4, paragraphs [0013] and [0014] and page 8, paragraph [0026] through page 10, paragraph [0032] and FIGS. 2-4. Thus no new matter is added.

Claims 16-29 have been rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description and enablement requirements. Claims 16-29 have also been rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In support of the Section 112, first paragraph rejection, the Examiner alleges that for Claim 16 the term “sealing at least a part of said recess” does not have support in the as-filed application. *Office Action at page 4*. In support of the Section 112, second paragraph rejection, the Examiner alleges that Claim 16 is “inconsistent with the specification with regard to the matter of sealing the recess by mounted cover element.” *Office Action at page 4*. Accordingly, Claim 16 is amended herein to delete the term at issue, viz., “at least a part of.” Therefore, Claim 16, as now written, meets the requirements of 35 U.S.C. § 112, first and second paragraphs. Since it is respectfully submitted that independent Claim 16 is in a condition for allowance and Claims 17- 29 depend directly or indirectly therefrom, they too are in a condition for allowance. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the Section 112, first and second paragraph rejections of Claims 16-29.

Claims 16-19, 21-25, 28 and 29 have been rejected under 35 U.S.C. §102(b) as allegedly being unpatentable over U.S. Patent Serial No. 5,276,718 to Ueda (hereinafter “Ueda”).

The Examiner alleges that the language of Claim 16 reads on Ueda, namely: “a) “plurality of channels” reads on holes 4a (see Fig. 34); b) “free edge portion with a recess” reads on edges 2d, 2d with a recess between them (see Fig. 35); c) “cover element” reads on element 5 (see Figs. 35 and 36); d) “profile element” reads on the combination of 3a and 3b, 4 and 3b (see Figs. 34 and 35).” *Office Action at page 4*.

Ueda's member 5 has a shape adapted to facilitate bending of Ueda's plate portions 2d together during a manufacturing step of the control rod. Another object of Ueda's member 5 is to prevent atoms from the neutron absorber 3d to mix into the weld joint between plate portions 2d. Ueda's member 5 acts as a spacer between the solid neutron absorber 3d and the material in the weld joint such that the neutron absorber does not come in direct contact with the material in the weld joint. Thus Ueda's plate portions 2d seal the opening portion 2c and not the member 5. It follows that Ueda fails to disclose a "cover element" as recited in amended Claim 16.

Unlike the invention recited in amended Claim 16 of the present application, Ueda does not disclose a "a cover element having a cover portion, said cover element being sealingly attached to said free edge portion to seal said recess, said cover portion is positioned outside of said recess and forms an external end surface of said control rod blade in a mounted state." Instead, Ueda discloses "member 5 are placed in the space 2b before a pair of plate portions 2d confronting each other in the opening portion 2c are bent inward so as to be closed by welding." *Ueda at column 2, lines 31-34.* Consequently, no portion of Ueda's member 5 is "positioned outside of said recess," as recited in amended Claim 16. Thus Ueda's plate portions 2d seal the opening portion 2c. In addition, Ueda's member 5 as shown in FIG. 35 does not read on the "cover portion . . . forms an external end surface of said control rod blade in a mounted state" as recited in amended Claim 16. For example, Ueda's FIG. 35 does not illustrate a "mounted state" because, as mentioned above Ueda's member 5 is placed in the space 2b before the plate portions 2d are bent inward. Moreover, Ueda's FIG. 36 shows no portion of member 5 either being "positioned outside of said recess" or being "an external end surface," as recited in Claim 16 as now written. Thus Ueda fails to disclose all the limitations of amended Claim 16.

In addition, none of Ueda's neutron absorbers 3a, 3b and 4 nor any combination thereof read on a "thin profile element," as recited in amended Claim 16. As stated in the Substitute Specification at page 4, paragraph [0014] of the present application, a "thin profile element" is defined as one that "does not substantially encroach on the space of the absorber material." In contrast, Ueda's element 3b is a neutron absorber of about "0.5 to about 2 cm." *Ueda at column 2, lines 63-65.* In addition, Ueda's elements 3a and 4 are also neutron absorbers. *Ueda at column 2, lines 27-28.* It follows that because Ueda's elements 3a, 3b and 4 are neutron absorbers, it is impossible for Ueda's elements 3a, 3b and/or 4 to not

substantially encroach on the space of the absorber material. Thus Ueda fails to disclose a "thin profile element" as recited in amended Claim 16.

At least because Ueda does not disclose a "a cover element having a cover portion, said cover element being sealingly attached to said free edge portion to seal said recess, said cover portion is positioned outside of said recess and forms an external end surface of said control rod blade in a mounted state" and because Ueda fails to disclose a "thin profile element" as is recited in amended Claim 16, it is respectfully submitted that Ueda can not anticipate that claim. For at least this reason, Claim 16 is allowable over Ueda. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the section 102 rejection of Claim 16.

Since it is respectfully submitted that independent Claim 16 is patentable over Ueda and Claims 17-19, 21-25, 28 and 29 depend directly or indirectly therefrom, they too are patentable over Ueda. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the section 102 rejections of Claims 17-19, 21-25, 28 and 29.

Claims 20 and 27 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Ueda. In addition, Claim 26 has been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Ueda in view of Research Disclosure No. 33925/92 (hereinafter "RD '92).

Since independent Claim 16 is deemed patentable and Claims 20, 26 and 27 depend directly therefrom, they too are deemed patentable. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the section 103 rejections of Claims 20, 26 and 27.

Applicant believes that the foregoing remarks are fully responsive to the Office Action and that the claims herein are allowable. An early action to that effect is earnestly solicited.

Should the Examiner have any questions regarding the present application, Applicant respectfully requests that the Examiner contact Applicant's representative at the phone number listed below.

No fee is believed due with the filing of this Amendment and Reply. However, if a fee is due, Applicant authorizes the payment of any additional charges that may be necessary to maintain the pendency of the present application to the undersigned attorney's Deposit Account No. 503342.

Respectfully submitted,

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